



State of Utah

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Executive Director

DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL

Douglas J. Hansen
Director

September 20, 2022

Vern C. Rogers, Director of Regulatory Affairs
EnergySolutions, LLC
299 South Main Street, Suite 1700
Salt Lake City, UT 84111

RE: Federal Cell Facility Application Requests for Information

Dear Mr. Rogers:

The Division of Waste Management and Radiation Control (Division) hereby provides initial Requests for Information (RFI) regarding the Federal Cell Facility Application dated August 4, 2022. Each individual paragraph in the attached document is numbered and represents an issue discovered in a review of the application.

When responding to an RFI, please use the assigned number representing the question. The Division will track all responses and provide regular updated information to the public and reviewers.

The current review does not represent a comprehensive evaluation of the Application's merit and additional RFI's will follow where appropriate.

If you have any questions regarding this letter, please call Otis Willoughby at (801) 536-0220.

Sincerely,

Douglas J. Hansen, Director

Division of Waste Management and Radiation Control

DJH/OHW/kd

Enclosure: Federal Cell Application Review –
Request for Information or Updates to the Application (RFI) (DRC-2022-021115)

c: Jeff Coombs, EHS, Health Officer, Tooele County Health Department
Bryan Slade, Environmental Health Director, Tooele County Health Department
EnergySolutions General Correspondence Email
LLRW General Correspondence Email

DRC-2022-021135

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Federal Cell Application Review

Request for Information or Updates to the Application (RFI)

General

- Each of the RFI's has been assigned an identifier with a numbering convention as follows-
 - Application/Appendix Section
 - Section/Appendix Subsection
 - Section/Appendix Subsubsection (when applicable)
 - Sequential numbering

Example: A question in Section 1, subsection 1, subsubsection 1 -The first RFI # would be 1.1.1-1, the next question in that section/subsection would be numbered 1.1.1-2

Please refer to the assigned RFI number when submitting a response.

- *Redacted Information-* The phrase “REDACTIED INFORMATION” is misspelled throughout the Application.
- *Documents Still Under Review-* Several documents listed throughout the application and appendices are still under review by the Division, including (i) the Basal Aquifer Study, and (ii) the Cover Test Cell Study. The Division has not yet approved all the study content. Please update the references to indicate their status, using appropriate notation (e.g., “under review by the Division”).

Section 1: General Information

- **1.2.2-1**

On Page 1-11, the link “General Industrial District M-G type uses” is expired and gives a 403 Forbidden message Error.

Section 2: Site Characteristics

- **2.1.2-1**

On Page 2-5, the “Census 2020” link sends the user an authentication message from a company that indicates that it will collect information on the user. Please fix the link so a user does not have to agree to unexpected privacy-release requirements.

- **2.2.-1**

On Page 2-8, in the last paragraph of Section 2.2 entitled “Meteorology and Climatology”, it states, "an independent firm evaluated on-site meteorological data collected from June 1993 to December 2020." However, EnergySolutions does not provide a citation for this claim.

- **2.3.1-1**

On Page 2-8, the “Hintze, 1980” link sends the user to a publication webpage, but access is not granted to allow the user to view the materials. Also, the publication associated with the link is Bisdorf and Zohdy (1980), not Hintze (1980).

- **2.4.1-1**

On Page 2-19, it says, “A Probable Maximum Precipitation and Probable Maximum Flood have been considered for the Clive Facilities (Appendix Y).” However, searches for each of the terms probable, maximum, precipitation, flood, PMP, and PMF in Appendix Y turned up zero results

- **2.10-1**

The following are discrepancies for citations referenced in this section and the associated electronic link to a file:

Page	Citation	Reference in Section	Electronic Ref
2-9	Moore and Sorensen 1979	Present	Missing
2-29, 2-51	Neptune 2021	Present	Missing
2-29	DOE 1984 and 1989	1989 Ref Missing	1989 Ref Missing
2-31	Ryan and Elimelech 1996	Missing	Missing
2-35	DWR 2014	Missing	Missing
2-36	Envirocare 2004	Missing	Missing
2-48	Cronquist et al. 1972	Present	Missing
2-49	NRC 1980	Missing	Missing
2-58	Missing	Utah 2014	Utah 2014

- **2.10.1-2**

On Page 2-55, the link “General Industrial District M-G type uses” is expired and gives a 403 Forbidden message Error.

Section 3: Design and Construction

- **3.1-1**

On Page 3-4, the “Table 3-1: Conditions [^1]” bracketed citation link sends users to Microsoft word and gives an error message.

- **3.1-2**

On Page 3-10, a typo appears in the hyperlink with the bracketed 1 “[1]”, this typo breaks the hyperlink.

- **3.1.1-1**

On Page 3-12, the Application says, “In addition, Appendix Y, *HAL PMF Tech Memo*, Figure 2 depicts the flow path of the modeled Probable Maximum Flood draining to the southwest of the Clive Facility.” However, the memo does not appear to be in Appendix Y.

- **3.2-1**

On Page 3-22, the Application addresses the cover as a principal design feature, and states that, efforts to “encourage runoff” on the cover design slope, velocities must still be limited, and indicates use of the following as bounding values:

Maximum theoretical velocities from Appendices M and O

Maximum drainage velocities during PMP:

from Appendices M and O

However, a review of Appendix M indicates that the text and tables of Appendix M pertain only to ditch calculations, not runoff occurring over the cover. Calculations or concepts presented for the cover design, cover slope, cover runoff and cover drainage velocities do not appear to exist within Appendix M.

- **3.2.9-1**

On Page 3-32, the referenced “Part B Attachment II-6 Contingency Plan” is an outdated plan from April 25, 2017. Multiple edits have taken place on the contingency plan since that date, including the list of emergency coordinators. Please replace the reference given with the current contingency plan dated February 23, 2022.

- **3.4.1-1**

On Page 3-44 the referenced “Part B Attachment II-6 Contingency Plan” is an outdated plan from April 25, 2017. Multiple edits have taken place on the contingency plan since that date, including the list of emergency coordinators. Please replace the reference given with the current contingency plan dated February 23, 2022.

- **3.4.3-1**

On Page 3-47, the referenced “Part B Attachment II-6 Contingency Plan” is an outdated plan from April 25, 2017. Multiple edits have taken place on the contingency plan since that date, including the list of emergency coordinators. Please replace the reference given with the current contingency plan dated February 23, 2022.

- **3.5.1-1**

On Page 3-49, the referenced “Part B Attachment II-6 Contingency Plan” is an outdated plan from April 25, 2017. Multiple edits have taken place on the contingency plan since that date, including the list of emergency coordinators. Please replace the reference given with the current contingency plan dated February 23, 2022.

Section 4: Facility Operations

- **4.1.12-1**

On Page 4-5 of the Application, it indicates that a review of unplanned events that have operational safety significance will be performed in accordance with procedure ES-AD-PR-008 Condition Report (Appendix V). A copy of this procedure is not included in Appendix V. Please provide a copy of or a link to ES-AD-PR-008 and identify the correct Appendix location. Three similar statements pointing to ES-AD-PR-008 are found in paragraphs 4.4.7.3, 8.5 and 9.1.16.

- **4.1.13-1**

On Page 4-6, the Application refers to Procedure FCF-SW-PR-203 in Appendix G. It is named inconsistently within the paragraph, and within Appendix G. This may cause confusion when trying to find the correct reference. The procedure is called by the following various names:

1. Federal Cell Facility Waste Acceptance Criteria
2. FCF Waste Acceptance Criteria
3. FCF WAC
4. Federal Cell Facility Acceptance Criteria (in headers)
5. Federal Cell Facility Containerized Waste Acceptance Criteria
6. The Waste Acceptance Criteria (e.g., in tables)

Please name these references and listings consistently to avoid potential confusion or difficulty in finding the cited procedure. An acronym in addition to the full name would be acceptable if properly introduced at the beginning.

- **4.4.1.3-1**

On Page 4-17, the Application refers to FCF-SH-PR-500 as the Federal Cell Facility Contingency Implementation Plan (Appendix G). However, that document does not appear to be found in Appendix G.

- **4.4.7-1**

On Page 4-24, the Application refers to FCF-SH-PR-500 as the Federal Cell Facility Contingency Implementation Plan (Appendix G). However, that document does not appear to be found in Appendix G.

- **4.4.7.3-1**

On Page 4-25 of the Application, it indicates that a review of unplanned events that have operational safety significance will be performed in accordance with procedure ES-AD-PR-008 Condition Report (Appendix V). A copy of this procedure is not included in Appendix V. Please provide a copy of or a link to ES-AD-PR-008 and identify the correct Appendix location.

- **4.4.7-2**

On Page 4-24, the “Attachment II-6 of the state-issued Part B Permit” hyperlink sends users to the DEQ webpage for the Part B Permit, but it does not send them to the specified attachment. Hyperlink should be updated to the specified attachment.

- **4.5.1-1**

On Page 4-26, the referenced “Part B Attachment II-6 Contingency Plan” . is an outdated plan from April 25, 2017. Multiple edits have taken place on the contingency plan since that date, including the list of emergency coordinators. Please replace the reference given with the current contingency plan dated February 23, 2022.

Section 5: Site Closure Plan and Institutional Controls

- **5.1.2.2-1**

On Page 5-4, NRC (1986) is cited, but no hot-link or printed reference is provided.

- **5.2.7-1**

On Page 5-8, the hyperlink “GWQDP” does not work or is broken.

- **5.3.8-1**

On Page 5-12, DOE (2019) is cited, but no hot-link or printed reference is provided.

- **5.3.9-1**

On Page 5-12, DOE (2019) is cited, but no hot-link or printed reference is provided.

Section 6: Safety Assessment

- **6.1.1.1-1**

On Page 6-2, there is a reference to Clive DU PA CSM v2.0. Yet no previous citation or reference appears to be given for the CSM acronym.

- **6.1.1.1-2**

On Page 6-2, there is a reference to Clive DU PA CSM v2.0. While the citation in each case does make a reference to Appendix O, Appendix O contains 1,131 pages, and it provides no index to its contents.

- **6.1.3-1**

On Page 6-6, there is a reference to Clive DU PA CSM v2.0. While the citation in each case does make a reference to Appendix O, Appendix O contains 1,131 pages, and it provides no index to its contents.

- **6.1.3-2**

On Page 6-7, there is a reference to Clive DU PA CSM v2.0. While the citation in each case does make a reference to Appendix O, Appendix O contains 1,131 pages, and it provides no index to its contents.

- **6.1.4.2-1**

On Page 6-10, the Application refers to FCF-SH-PR-500 as the Federal Cell Facility Contingency Implementation Plan (Appendix G). However, that document does not appear to be found in Appendix G.

- **6.1.5-1**

On Page 6-11, there is a reference to Clive DU PA CSM v2.0. While the citation in each case does make a reference to Appendix O, Appendix O contains 1,131 pages, and it provides no index to its contents.

- **6.1.5.1-1**

On Page 6-13, there is a reference to Clive DU PA CSM v2.0. While the citation in each case does make a reference to Appendix O, Appendix O contains 1,131 pages, and it provides no index to its contents.

- **6.1.5.2-1**

On Page 6-15, there is a reference to Clive DU PA CSM v2.0. While the citation in each case does make a reference to Appendix O, Appendix O contains 1,131 pages, and it provides no index to its contents.

- **6.1.5.3-1**

On Page 6-19, there is a reference to Clive DU PA CSM v2.0. While the citation in each case does make a reference to Appendix O, Appendix O contains 1,131 pages, and it provides no index to its contents.

- **6.1.6.2-1**

On Page 6-23, there is a reference to Clive DU PA CSM v2.0. While the citation in each case does make a reference to Appendix O, Appendix O contains 1,131 pages, and it provides no index to its contents.

- **6.1.6.3-1**

On Pages 6-26, there is a reference to Clive DU PA CSM v2.0. While the citation in each case does make a reference to Appendix O, Appendix O contains 1,131 pages, and it provides no index to its contents.

- **6.1.6.4-1**

On Pages 6-27, there is a reference to Clive DU PA CSM v2.0. While the citation in each case does make a reference to Appendix O, Appendix O contains 1,131 pages, and it provides no index to its contents.

- **6.1.4.2-2**

On Page 6-10, NRC (1980a) is cited but no hot links, printed references or digital references are provided.

- **6.3.1-1**

On Pages 6-35, there is a reference to Clive DU PA CSM v2.0. While the citation in each case does make a reference to Appendix O, Appendix O contains 1,131 pages, and it provides no index to its contents.

- **6.4.2-1**

On Page 6-45, a reference is given for “Bingham Environmental, “Hydrogeologic Report Mixed Waste Disposal Area at Envirocare of Utah Waste Disposal Facility, South Clive, Utah.” Parts 1 & 2, July 1992. (Bingham Environmental, 1992).” But the

citation is given on Page 6-42 as “(Bingham 1992a, b, and c).” In other words, in the citation, (i) instead of “Bingham Environmental” only “Bingham” is used, (ii) instead of “1992”, “1992a, b and c” is used, and (iii) instead of references to only Parts 1 and 2, references are given to 1992a, 1992b and 1992c (three documents compared with two, and letters instead of numbers used to differentiate references from the same year). In addition, the associated electronic files included in the Application include only a single, unindexed file called Bingham.pdf consisting of 3,127 pages.

- **6.4.2-1**

On Page 6-46, a reference is given for DOE (1989). However, there appears to be no citation or electronic file submitted for that reference.

Section 7: Occupational Radiation Protection

- **7.1.3-1**

On Page 7-3, the Application refers to FCF-AD-PR-100 as the Federal Cell Facility License Compliance (Appendix J). However, a document having this name does not appear in Appendix J. A document having a similar but slightly different name and having the same numerical identification code does exist in the Appendix.

- **7.3.4-1**

On Page 7-9, NRC (1993b) is cited. However, NRC (1993b) is not referenced in Section 7 as a reference, nor is it provided as an electronic file in the Application. However, there is a reference in the section for NRC (1993a), along with an electronic file for NRC 1993a.pdf, but no citation in the text for NRC (1993a). Please adjust the citation and/or reference(s) to make the items mutually consistent.

- **7.3.4-2**

On Page 7-10, NRC (1993b) is cited. However, NRC (1993b) is not referenced in Section 7 as a reference, nor is it provided as an electronic file in the Application. However, there is a reference in the section for NRC (1993a), along with an electronic file for NRC 1993a.pdf, but no citation in the text for NRC (1993a). Please adjust the citation and/or reference(s) to make the items mutually consistent.

- **7.4.5-1**

On Page 7-17, the “49 CFR 173” link takes a user to a 49 CFR overview chapter rather than directly to Part 173.

- **7.4.5-2**

On Page 7-17, the “49 CFR 173.443” link works, but it is only underlined, not highlighted in blue. A user might not find the link name easily.

- **7.5.1-1**

On Page 7-19, the “49 CFR 172.450” link has a blue highlight, but the hyperlink is not working.

Section 8: Organizational Structure

- **8.4-1**

On Page 8-24 the referenced “Part B Attachment II-6 Contingency Plan” is an outdated plan from April 25, 2017. Multiple edits have taken place on the contingency plan since that date, including the list of emergency coordinators. Please replace the reference given with the current contingency plan dated February 23, 2022.

- **8.4.3-1**

On Page 8-25, the “NRC Regulatory Guide 4.20” hyperlink does not work.

- **8.5**

On Page 8-26 of the Application, it indicates that a review of unplanned events that have operational safety significance will be performed in accordance with procedure ES-AD-PR-008 Condition Report (Appendix V). A copy of this procedure is not included in Appendix V. Please provide a copy of or a link to ES-AD-PR-008 and identify the correct Appendix location.

- **8.8.1-1**

On Page 8-30 the referenced “Part B Attachment II-6 Contingency Plan” is an outdated plan from April 25, 2017. Multiple edits have taken place on the contingency plan since that date, including the list of emergency coordinators. Please replace the reference given with the current contingency plan dated February 23, 2022.

Section 9: Quality Assurance

- **9.1.2.3-1**

On Page 9-7, the last paragraph cites “Nonmandatory Appendix 2A-1” and “Nonmandatory Appendix 2A-3.” No hot-linked files or printed references appear to be associated with these file or document names.

- **9.1.16**

On Page 9-27 of the Application, it indicates that a review of unplanned events that have operational safety significance will be performed in accordance with procedure ES-AD-PR-008 Condition Report (Appendix V). A copy of this procedure is not included in Appendix V. Please provide a copy of or a link to ES-AD-PR-008 and identify the correct Appendix location.